

In the Claims

1. (Original) A welding system comprising:
 - a power source having a primary contactor and a secondary contactor;
 - a weld cable connecting the power source to a remote device, the remote device operable in a standby mode; and
 - a controller to regulate activation of the first and the second contactors such that a non-welding voltage is applied from the power source to the remote device across the weld cable when the remote device is in a standby mode.
2. (Original) The welding system of claim 1 wherein the remote device is a wire feeder having a plurality of electronics to control operation thereof and wherein the secondary contactor is activated to close a low voltage circuit between the power source and the wire feeder when the wire feeder is in a standby mode to power the plurality of electronics.
3. (Original) The welding system of claim 2 wherein the wire feeder includes:
 - an electrode holder configured to hold an electrode in relative proximity to a workpiece such that a welding arc is created between the electrode and the workpiece, the electrode holder having a trigger that when activated commences a welding process; and
 - a transmitter configured to detect activation of the trigger and responsive thereto transmit a signal indicative of desired welding operation across the weld cable to the power source.
4. (Original) The welding system of claim 3 wherein the power source includes a receiver remote from the wire feeder and configured to receive the signal and instruct the controller to regulate the power source according to data embodied in the signal.

5. (Original) The welding system of claim 4 wherein the controller is designed to cause the primary contactor to close and form a welding circuit between the power source and the wire feeder upon activation of the trigger.

6. (Original) The welding system of claim 2 further comprising a battery to supply a low voltage power to electronics in the wire feeder when the wire feeder is in a standby mode.

7. (Original) The welding system of claim 6 wherein the battery is disposed in the power source.

8. (Original) The welding system of claim 1 wherein the primary contactor is configured to only form a welding circuit between the power source and remote device upon receipt of a modulated signal indicative of a welding process initiation command.

9. (Original) The welding system of claim 8 wherein the modulated signal includes a data packet embedded with an address, data, and package information checksum.

10. (Original) The welding system of claim 2 wherein the wire feeder is further configured to automatically supply consumable wire to the weld when a welding circuit is created between the electrode and the workpiece.

11. (Original) The welding system of claim 1 wherein the remote device includes a portable wire feeder.

12. (Original) A welding system comprising:
a power source configured to supply a first power usable during a welding process and supply a second power usable during a standby mode of operation, the second power having a voltage different from a voltage of the first power;

a wire feeder configured to receive the first power from the power source when supplying a consumable electrode to a weld and receive the second power when in the standby mode of operation; and

a welding cable connecting the power source and the wire feeder and configured to carry the first and the second power thereacross.

13. (Original) The welding system of claim 12 wherein the power source further comprises a battery to supply the second power to power electronics of the wire feeder during standby mode of operation.

14. (Original) The welding system of claim 13 wherein the first power provides power for the welding process and the electronics of the wire feeder during the welding process.

15. (Original) The welding system of claim 13 wherein the wire feeder further comprises a serializing circuit to serialize a data packet indicative of desired operational parameters and wherein the power source includes a decoder to decode the data packet.

16. (Original) The welding system of claim 15 wherein the desired operational parameters include at least one of power source output magnitude, power source welding mode, purging, and jogging.

17. (Currently Amended) The welding system of claim 12 wherein the voltage of the ~~second~~first power exceeds the voltage of the ~~first~~second power in amplitude.

18. (Currently Amended) A method of remotely controlling a power source for welding comprising the steps of:

packaging feedback of operational commands for a welding-type process into a data packet of encoded data;

transmitting the data packet to a power source from a remote device across a weld cable ~~designed to provide~~ regardless of whether a welding power for the welding-type process is being provided thereon; and

controlling the power source in accordance with at least data embodied in the data packet.

19. (Original) The method of claim 18 further comprising the step of serially transmitting multiple data packets to the power source.

20. (Original) The method of claim 18 further comprising the step of powering electronics of the remote device when in a standby mode with low voltage DC power applied across the weld cable.

21. (Currently Amended) The method of claim 18 further comprising the step of powering electronics of the ~~wire feeder~~ remote device when in a welding mode with a portion of the welding power provided across the weld cable.

22. (Original) The method of claim 18 wherein the data packet includes an address, operational data, and a checksum.

23. (Original) The method of claim 18 wherein the step of transmitting occurs during an active welding operation.

24. (New) A method of remotely controlling a power source for welding comprising the steps of:

packaging feedback of operational commands for a welding-type process into a data packet of encoded data;

transmitting the data packet to a power source from a remote device across a weld cable designed to provide welding power for the welding-type process;

controlling the power source in accordance with at least data embodied in the data packet; and

powering electronics of the remote device when in a standby mode with low voltage DC power applied across the weld cable.